

# **Cedar Ridge Fuels Reduction Project (57025)**

## **Scoping Package**

USDA Forest Service  
Stanislaus National Forest  
Mi-Wok Ranger District  
Tuolumne County, California

The Forest Service is seeking initial scoping comments on the Cedar Ridge Fuels Reduction Project. The actions proposed in the Cedar Ridge Fuels Reduction Project are in accordance with Section 605 of HFRA (16 U.S.C.6591d), 36 CFR 220.6(e)(20), and 36 CFR 220.6(d)(1) Categorical Exclusions. A Decision Memo is expected to be completed and signed before January of 2020. This scoping package provides information related to the proposed action, the scoping process, and how to submit comments.

### **PROJECT LOCATION**

---

This project is located adjacent to and within the community of Cedar Ridge, Big Hill and Twain Harte, with proposed treatments in the vicinity of Middlecamp Road, Sherwood Forest, Cedar Ridge, the Sierra Outdoor School, and Mount Elizabeth (Map 1). In the SouthFork Stanislaus and North Tuolumne watersheds, the project is located within: T2N, R15E, Section 1-9, 11, 13-15, 18; T2N, R16E, Sec. 5-10, 15, 16, 18; T3N, R15E, Sec. 24-26, 31-36; T3N, R16E, Sec. 28-33.

### **BACKGROUND**

---

Since 2000, the Stanislaus National Forest has experienced large, severe wildfires that are uncharacteristic of natural disturbance regime. Watersheds, wildlife habitat, communities, and forest visitors have been greatly impacted by these extreme events.

### **PURPOSE AND NEED**

---

The overall purpose of the Cedar Ridge Fuels Reduction Project is to improve community and landscape safety and resilience to wildfires. The primary purpose of the Cedar Ridge Fuels Reduction project is to improve vegetation structure and age class diversity to make ecosystems more resilient to wildfire by reducing horizontal and vertical fuel continuity. Vegetation treatments will improve watershed resilience to natural and human caused wildfires by reducing fuel loading and associated heat residence time that contribute to severe soil effects, elevated erosion rates, and large patches of even-aged vegetation. Fire behavior will also be lessened by reducing ladder fuels that contribute to crown fire initiation and spread, which has been shown to have significant impacts on wildlife habitat and populations (e.g., Rim Fire 2013, King Fire 2014, Rough Fire 2015). Fuelbreaks will be established and maintained to connect existing fuelbreak work on private lands and establish and maintain fuelbreaks on strategic ridgelines and topographic features. Helicopter landing areas (helispots) will be established at strategic locations along fuelbreaks to improve fire management access, as safe locations for landing helicopters are limited in the project area. These strategic vegetation treatments will ultimately

protect life and property when wildfire occurs in the vicinity of Cedar Ridge, Big Hill, and Twain Harte.

Vegetation treatments proposed in this project are needed to:

- reduce potential for extreme fire behavior and resistance to control;
- improve opportunities for managing wildfires;
- keep wildfires and wildfire severity within the natural range of variability;
- keep fires originating on private land from moving into the lower South Fork Stanislaus watershed and vice versa;
- protect wildlife habitat;
- enhance landscape and community fire resilience;
- improve the health and vigor of vegetation;
- maximize large tree retention by reducing the threat of insects and disease and increasing resilience to wildfire;
- reduce potential for human cause wildfire starts.

Unauthorized OHV routes are proposed for rehabilitation to reduce soil and watershed impacts associated with high route densities (e.g., erosion, surface runoff concentration, high stream sediment loading). This action is needed to improve ease of travel route navigation during wildfires and protect watershed qualities.

The project area supports a high density of abandoned mines. Abandoned mines will be closed to protect public health and safety from injury or death resulting from hazardous underground mining infrastructure that is no longer in use.

## **PROPOSED ACTION**

---

The Forest Service proposes to treat vegetation to create defensible fuel profiles in fuel reduction units, within disconnected National Forest System (NFS) parcels, and along fuelbreaks to improve landscape and community resilience to wildfire (Table 1, Map 2). Additional proposed treatments include abandoned mine closure and unauthorized OHV route rehabilitation. This section described the conditions and treatment methods proposed through this project.

Table 1. Unit types and potential vegetation treatment methods. All methods may be used to meet desired conditions. X demarcation in the table below indicated treatment method is included in corresponding unit type. + demarcation indicates herbicides will be used to treat noxious weeds.

Unit Type	Treatment							Total Acres
	Mechanical	Biomass Removal	Mastication	Hand Thinning	Pile and Burn	Broadcast Burning	Herbicides	
Fuels Units	X	X	X	X	X	X	+	1,630
Fuelbreaks & Strategic Roadsides	X	X	X	X	X	X	X	583
Disconnected USFS Parcels	X	X	X	X	X	NA	+	483
Total Acres	2,671	2,671	2,671	2,671	2,671	2,187	593*	

\* Herbicides may be used to manage noxious weeds in all unit types. Herbicide acres account for treatments to meet vegetation conditions described in this document, as well as known noxious weed populations. Includes 25 acres of strategic roadside, 10 acres of noxious weed, and 558 acres of fuelbreak herbicide treatment. These acres are approximate, as weed population expansion and establishment may result in additional treatment acres.

## Fuelbreaks

Fuelbreaks are strategically located along major roads and topographic features (ridges) to provide opportunities for fire management. Forest and shrub canopy cover is relatively open and effectiveness of suppression actions, including aerial application of retardant, are enhanced. These landscape features can potentially reduce fire behavior and enhance fire suppression management opportunities. Several miles of fuelbreaks proposed in this project are located along travel routes, which will provide safer conditions during evacuations and for fireline resources when a wildfire occurs. Approximately 588 acres of fuelbreaks will be treated through this project to connect and improve the existing fuelbreak network on National Forest System (NFS) and private lands.

### *Conifer Dominated Vegetation*

Thin trees to a spacing of ½ to 1 crown width to attain a spacing of 15 to 25 feet between residual crowns. Remove all suppressed and intermediate crown class trees. Clumped dominant and codominant trees may be thinned to attain adequate tree spacing as described above. Individual trees exhibiting good vigor will be given retention preference. Do not remove any live tree over 30 inches diameter at breast height (DBH). Priority for removal is white fir, incense cedar, and other pine species that are not capable of release or have a high or moderate to high mistletoe infection (Hawthorn rating of 4, 5, or 6), or other defects that would prevent the tree from attaining good health and vigor. Remove all sugar pines less than 16 inch DBH with evidence of heavy blister rust infection or swollen bole or branches with dead and dying needles

that are within 2 feet of the bole. Trees less than 10 inches DBH will be removed using methods described in Table 1. Small trees (<10 inch DBH) would be spaced approximately 25 feet apart to maintain stocking levels capable of sustaining forest ecosystems. Remove all snags. Hardwoods less than 12 inches DBH may be removed to facilitate treatment efficacy and/or safety, but should otherwise be retained. Shrub species over 1 foot in height would be removed in order to develop vertical separation between the ground and the canopy of retained trees. Bear clover or grass and forbs over 1 foot tall are not required to be treated unless identified as a noxious invasive weed species. To promote habitat diversity and soil cover, up to 25 percent of understory vegetation may be retained outside of tree driplines. Remove large snags that pose a safety hazard to roads. To minimize surface fuels and increase effectiveness of the treatment, all dead and down material is to be removed, piled and burned, or broadcast burned.

#### *Oak and Shrub Dominated Vegetation*

Do not remove any live tree over 25" DBH. Healthy individuals should be well distributed and given retention preference. Because black oak is more common across the greater landscape than live oak, black oak will be prioritized for removal over live oak. Trees less than 10 inches DBH and slash will be removed using the methods outlined in Table 1. Remove all snags.

To create horizontal separation between residual tree crowns, desired canopy cover within hardwood stands would be no more than 40 percent. Criteria for trees that are retained include single stems and healthy crowns with at least 1/3 live crown ratio. For multi-stemmed trees, retain the dominant leader and remove the remaining stems. In order to reduce ladder fuels, residual trees shall be pruned of all branches up to 10 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree.

Where oak and conifers are lacking in the overstory and manzanita greater than 10 inch DBH is present, retain dominant stem and remove all other stems under the dripline of remaining manzanita.

Understory vegetation over 1 foot in height will be removed to develop vertical separation. Where trees are sparse and/or shrubs dominate, individual or small groups of plants may be retained to provide soil cover and habitat diversity. Residual plants must be retained beyond the driplines overstory trees.

#### **Fuel Reduction Units and Disconnected Parcels**

Fuel Reduction units are relatively large continuous areas of NFS lands that range in size from 4 to 886 acres and account for approximately 1,630 acres of this project. Disconnected parcels are also NFS lands that range in size from 38 to 138 acres and account for approximately 483 total acres. Both of these land types are located in the Wildland-Urban Interface, fuel reduction units are connected to continuous NFS lands and disconnected parcels are small areas surrounded by large areas of private land. Treatments in these areas are intended to modify fire behavior adjacent to private property and improve community and landscape resilience to wildfire. Vegetation modification in these units would emphasize retaining tree cover with modest spacing of crowns and increasing the distance between ground fuels and tree crowns. All treatment tools

described in Table 1 may be applied to these lands to achieve desired vegetation structure and fuel profiles.

Thin trees to attain a spacing of 10-15 feet between residual crowns. Remove all suppressed and intermediate crown class trees. Do not remove any live tree over 30 inch DBH. Priority for removal is white fir, incense cedar, and other pine species that are not capable of release or have a high or moderate to high mistletoe infection (Hawksworth rating of 4, 5, or 6), or other defects that would prevent the tree from attaining good health and vigor. Remove all sugar pines less than 16 inch DBH with evidence of heavy blister rust infection or swollen bole or branches with dead and dying needles that are within 2 feet of the bole. Residual trees will be pruned of all branches up to 8 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree. Shrub species over 1 foot in height would be removed in order to develop vertical separation between the ground and the canopy of retained trees when located within the drip lines of an overstory tree. Remove large snags that pose a safety hazard to roads; otherwise retain 4 of the largest snags per acre. Limit woody debris to less than 20 tons per acre on average, in the 1 hour, 10 hour, and 100 hour size class. 1000 hour and greater fuels shall be limited to 4 to 6 logs per acre. With a desired size greater than or equal to 20 inches diameter and 10 feet in length. Dead and down material is to be removed, piled and burned, or broadcast burned.

Where a dominant conifer overstory is lacking, vegetation conditions described in the *Oak and Shrub Dominated Vegetation* section of *Fuelbreaks* above will be applied to fuels units.

### **Treatments Common to all Unit Types**

#### *Spotted Owl Protected Activity Centers (PACs)*

To protect California spotted owl individuals within the project area, understory and ladder fuels will be reduced within protected activity centers (PACs). Desired condition is to retain a structurally complex and high canopy cover (60-70%) forest with reduced surface and ladder fuels. Reducing fuels will provide sustainable habitat for California Spotted Owl and increase landscape fire resiliency.

#### WUI Defense Zone

Do not remove any live tree over 20 inches DBH. Hardwoods over 12 inches DBH are to be retained. Priority for removal is white fir, incense cedar, and other pine species that are not capable of release or have a high or moderate to high mistletoe infection (Hawksworth rating of 4, 5, or 6), or other defects that would prevent the tree from attaining good health and vigor. All sugar pines less than 16 inches DBH with evidence of heavy blister rust infection (swollen bole or branches w/ dead or dying needles) can be removed. Remove live trees up to 10 inches DBH. Trees under 10 inches DBH in openings are to be thinned to 20 foot spacing. Residual trees shall be pruned of all branches up to 8 feet off the forest floor, not to reduce the live crown ratio below 1/2 of the height of the tree. Shrub species over 1 foot in height would be removed in order to develop vertical separation between the ground and the canopy of retained trees. Bear clover or grass and forbs over 1 foot tall are not required to be treated. Up to 25 percent of understory vegetation will be retained in discontinuous patches to maintain understory habitat and soil cover. Retain 4 of the largest snags per acre, unless deemed to be hazardous to life or property.

Limit woody debris to less than 20 tons per acre on average, in the 1hr, 10hr, and 100hr size class. 1000hr and greater fuels shall be limited to 4 to 6 logs per acre with a desired size greater than or equal to 20 inches diameter and 10 feet in length. Dead and down material beyond 20 tons per acre is to be removed, piled and burned, or broadcast burned.

#### WUI Defense & Threat Zone

Prescribed burning is allowed within the 500-foot radius buffer of the PAC activity center. Hand treatments, including handline construction, tree pruning, and cutting of small trees (less than 6 inch DBH), may occur prior to burning as needed to protect important elements of owl habitat.

#### *Plantations*

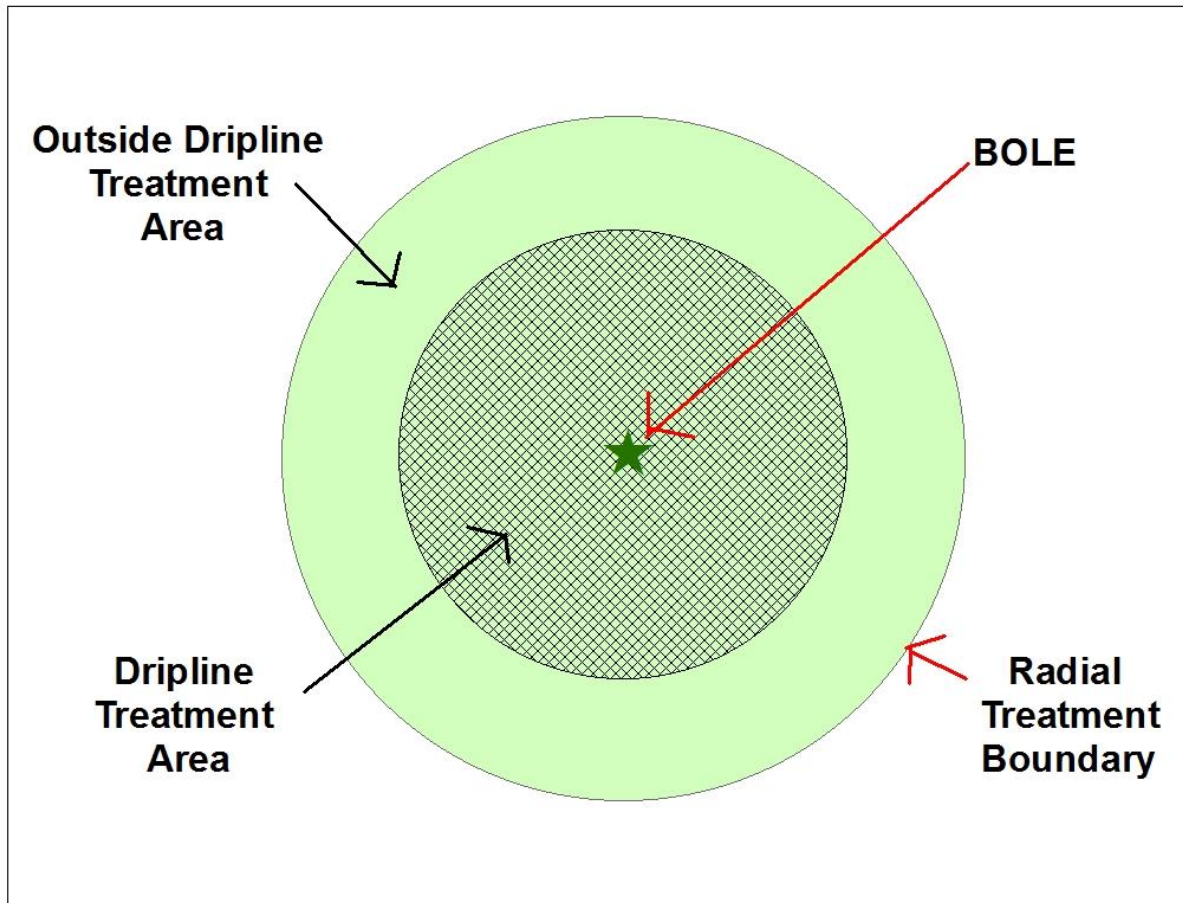
Thin plantations in all unit types to achieve 25 foot crown spacing of residual trees or consistent with desired conditions for each treatment unit designation. Prune all branches of retained trees to a height of 10 feet and maintain a live crown ratio of at least 1/2 of the height of the tree. The largest individuals and dominant species of the plantation should be retained. Priority for removal is white fir, incense cedar, and pine species that are not capable of release, have a high or moderate to high mistletoe infection (Hawksworth rating of 4, 5, or 6), or have other defects that would prevent the tree from attaining good health and vigor. Trees less than 10 inches DBH will be removed through biomass, broadcast burn or piling and burning.

#### *Radial Release of Legacy Trees*

Legacy trees in the project area survived recent extreme drought conditions, past fires, and have characteristics (e.g., thick bark, crown height and shape) that make them resilient to wildfire. However, younger understory vegetation put these individuals at risk of severe damage and/or mortality when drought or wildfire enters stands. To promote the health, vigor and fire resiliency of large trees on the landscape, competing vegetation and ladder fuels will be treated under and adjacent to large oak and pine individuals throughout the project area.

This treatment applies to all treatment areas (fuelbreaks, disconnected parcels, fuels units) where legacy trees are present. The prescription will be applied to up to 3 legacy trees per acre. For the purpose of this project legacy trees are pine species with a DBH greater than 30 inches, and blue or live oak greater than 20 inches DBH. Radial pine treatments are prescribed for 1 chain (66 feet) from the bole of legacy pines. The treatment area is divided into two zones (Figure 1): within the dripline of the individual tree canopy; and the remaining radial distance outside the dripline as illustrated below.

Figure 1. Graphic depiction of radial release treatment zones.



Remove conifer seedlings, saplings and trees between 10 and 30 inches DBH within 1 chains (66 feet) of legacy pines. All non-sugar pine seedlings and saplings will be removed from the treatment area. Below the dripline of identified trees, all conifers and hardwood trees will be removed regardless of species. Beyond the dripline of identified trees, leave all sugar pine within the 1 chain treatment area and outside the dripline if they do not show signs of rust.

Remove conifer seedlings, saplings and trees between 10 and 30 inches DBH around up to 3 healthy legacy oaks per acre with greater than 20 inch DBH. Treatment area radius from the main stem/bole will be 30 feet within the fuelbreaks and is limited to 20 feet in the all other units. Retain conifers up to 30 inches DBH within oak release treatment area. No treatment will be applied to oak individuals expressing signs of declining health (e.g., completely overtopped, sluffing bark).

### *Firelines*

Lines to control fire spread will be constructed wherever necessary to keep pile and broadcast prescribed burns from spreading and where necessary for long-term wildfire management. All lines will be rehabilitated prior to any predicted rain. All lines will be hidden from view from roadways or trail systems to limit OHV use. Duff and litter layer will be pulled back to cover

areas of mineral soil. Vegetation cut during line construction will be piled, lined, and covered. Trenching of lines should meet the waterbar standards captured in Table 2.

Table 2. Slope gradient and waterbar spacing for firelines occurring across soils with all Erosion Hazard Ratings.

Fireline Gradient (%)	Waterbar Spacing (ft) by Erosion Hazard Rating			
	Low	Moderate	High	Very High
1-6	400	350	300	250
7-9	300	250	200	150
10-14	200	175	150	125
15-20	150	120	90	60
21-40	90	70	50	30
41-60	50	40	25	15

### *Herbicides*

Herbicides will be used as a secondary treatment to maintain open vegetation structure in fuelbreaks and within 25 feet of strategic roads, as well as to manage noxious weeds in all unit types. Strategic roads are those that provide critical wildfire access for fireline resources (e.g., fire engines) and bisect fuels and disconnected parcel treatment areas. Approximately 558 acres of fuelbreaks, 25 acres of strategic roadsides and 10 acres of noxious weed populations will be treated with herbicides.

Shrub species, including young oaks, would be primarily targeted for treatment with a retention not to exceed 25 percent understory vegetative cover. Grasses, forbs, and bear clover will not be targeted for fuels management using herbicides. These species will be treated using prescribed fire. Treatments would occur in years 1, 3 and 5 following mechanical, biomass, hand thinning, piling and burning and/or broadcast burn treatment completion and will be need-based and dependent upon vegetation response where understory vegetation is less than 2 feet tall. Noxious weed populations will be treated at a frequency necessary to decrease population extent, spread and seed production. Timing and method of all herbicide application would maximize treatment effectiveness.

### *Unauthorized Route Rehabilitation*

To compliment completed OHV restoration projects within project area (Cedar Ridge and Sampson OHV Restoration Projects), unauthorized non-system routes within the project area will be rehabilitated to protect watershed qualities, improve ease of authorized route navigation, and reduce potential for human fire starts. These efforts will improve desired conditions within the project area as described in the 2010 Travel Management Record of Decision (USDA 2010).

Rehabilitation of up to 10 miles of unauthorized non-system routes will include installation of vehicle control barriers, signing, unauthorized non-system motorized route blocking, sub-soiling, and waterbaring. The following will be installed along roads to deter motorized cross-country



travel and unauthorized route creation where deemed necessary following vegetation treatments: compressed fiberglass signs, bollards, large logs, boulders or other natural material.

#### *Abandoned Mine Closure*

Abandoned mines within the project area will be closed to protect human health and safety. No active mining claims will be treated through this project. Methods used to close abandoned mines will be friendly to wildlife and other known sensitive resources.

### **Vegetation Treatment Methods**

A combination of treatment methods will be applied to all unit types depending on environmental conditions at the time of implementation. This section depicts where those methods may be applied and defines what equipment and activities these treatment methods entail (Table 1).

#### *Mechanical*

Mechanized equipment will be used in areas of dense vegetation where slopes are less than 35 percent. Excavator, mini excavators, skid steer, and dozer piling will be used to thin vegetation by pushing shrubs, small trees and downed fuels into piles for burning.

#### *Biomass Removal*

Small trees between 4 inches and 10 inches DBH would be removed except in open areas where large trees are sparse. Dominant and codominant trees under 10 inches DBH in openings are to be thinned to 20 foot spacing. Feller buncher, rubber-tired skidder, chipper, chip truck, and/or loader may be used to accomplish biomass treatments.

#### *Mastication*

Mastication includes the use of tracked equipment with a mastication device or a tracked chipper capable of moving cross country. Mastication treatments consist of shredding shrubs, small trees and woody debris in the understory. The shredded material that is generated would be left on site. This treatment would be conducted in areas that are predominantly shrub dominated or in plantations with intermixed shrubs, as well as a follow-up to thinning and biomass treatments in some areas. Hardwoods over 10 inch DBH are to be retained. Some hardwoods under 10 inch DBH may be masticated to facilitate efficiency, safety or efficacy of the treatment.

#### *Hand Thinning*

Hand thinning would remove trees and shrubs using chainsaws and hand tools where mechanical treatment is infeasible due to slope, resource concerns (e.g., protection of private property), or other conditions that would preclude access with mechanized equipment. Pruning would entail the removal of lower tree branches to raise height to live crown and reduce ladder fuels. The resulting slash would be piled and burned.

*Piling and burning*

Cut trees and slash may be piled by hand or machine and burned under favorable conditions once the piles have cured. To the maximum extent possible, piles will be constructed in natural openings, landings, on top of cut stumps where trees have been removed, and on top of noxious weed populations where burning is a documented effective eradication treatment method. Piles will be constructed at least 10 feet from any live tree. These piles will be burned according to a prescribed burn plan written by a qualified burn boss. In situations where Air Curtain Burners are viable, they may be used as a replacement for pile burning.

*Broadcast Burning*

Timing of underburning as a primary or secondary treatment shall be based on vegetation structure. Prior to broadcast burn ignition, perimeter fireline would be constructed where roads, trails, or natural barriers are absent. These firelines will remove vegetation including trees up to 6 inches DBH, pruning trees, and scraping the ground to create a bare soil control line. Hand tools, dozers, skid steers, and explosives may be used to build control lines. All firelines would follow the established guidelines for water bar construction as outlined in the Best Management Practices (BMPs). Firelines visible from roads would be camouflaged by raking duff back to discourage unauthorized use after burning. Broadcast burns will be implemented according to a prescribed burn plan written by a qualified burn boss.

*Herbicides*

Fuelbreaks are rapidly recolonized by shrub species that limit the duration of hand and mechanical treatment effectiveness. Herbicides would be economically efficient in controlling undesirable vegetation. The prescription proposed would be used in combination with mechanical or hand methods, where hand applications of the herbicide glyphosate with an appropriate surfactant would be used to additionally control vegetation. Undesirable shrub growth would be treated for up to 5 years, as needed to maintain the vegetation at acceptable fuels conditions. Only re-sprouting shrub species would be targeted in the herbicide applications. Bear clover will not be targeted for herbicide treatment. All herbicides will be applied by hand, broadcast spraying is prohibited. Fuelbreaks and strategic roadsides will be treated in years 1, 3 and 5 following mechanical, biomass, hand thinning, piling and burning and/or broadcast burn treatment completion and will be based on vegetation response. Noxious weed populations will be treated at a frequency necessary to decrease population extent, spread, and seed production. Herbicides will be applied at the appropriate time of year to insure treatments are most effective.

## **SCOPING PROCESS**

---

Public participation is important at numerous points during project planning and analysis. The scoping intent is to share our initial proposal and seek information, comments, and assistance from federal, state, and local agencies and individuals or organizations that may be interested in or affected by the proposed action. To accomplish this intent, we request your input and comments be submitted prior to November 1, 2019. Although you are encouraged to submit comments at any point during the planning process, input received prior to this date will be most

useful in order for us to consider your comments and suggestions during project planning and analysis.

## HOW TO COMMENT

---

Comments may be mailed to the Mi-Wuk Ranger District, Attn: **Cedar Ridge Fuels Reduction Project**; P.O. Box 100, Mi-Wuk Village, CA 95346; or delivered to 19777 Greenley Road, Sonora, CA 95370 during business hours (M-F 8:00 am to 4:30 pm). Submit electronic comments, in common formats (.doc, .pdf, .txt, .rtf) to [comments-pacificsouthwest-stanislaus-miwok@fs.fed.us](mailto:comments-pacificsouthwest-stanislaus-miwok@fs.fed.us) with Subject: **Cedar Ridge Fuels Reduction**. Names and addresses of those who comment will be considered part of the public record on this proposed action and will be available for public inspection. **Please submit comments prior to November 1, 2019.**

## INFORMATION CONTACT

---

For additional information regarding this project, contact Carly Gibson at the Mi-Wuk Ranger District, P.O. Box 100, Mi-Wuk Village, CA 95346; e-mail [carly.gibson@usda.gov](mailto:carly.gibson@usda.gov); or phone (209)532-3671.

## **MAP PACKAGE**

---

Map 1. Cedar Ridge Fuels Reduction Project vicinity map.

Map 2. Cedar Ridge Fuels Reduction Project treatment unit map.

Map 3. Cedar Ridge Fuels Reduction Project and fuelbreaks on private lands.  
Treatments on private lands are in various stages of completion.